

## 1 Objectives

Your goal for this lecture is to...

- know who your instructors are, and how they plan to organize the course.
- know what you should expect to learn in this course.
- know why we study programming languages.
- know two questions to use to categorize programming languages, and the answers to those questions for your favorite languages.
- know the major themes of this course.
- know a few things about the language we will use.

## 2 Course Objectives

- Understand major classes of programming languages: techniques, features, styles.
- How to specify formally the meaning of a language — to people and to the computer.
- Three Powerful Ideas:
  1. Recursion
  2. Abstraction
  3. Transformation
- How to choose a language.
- How to implement a language.

Emphasis: learn theory and apply it.

## 3 Contact Information

**Office:** 110 SB

**Hours:** M,W 13.30–14.30, and by appointment.

**Email:** <beckman.iit@gmail.com> Calendar and IM available at this address also!

**Course Web Page:** <http://prancingTarantula.net/cs440-fa06>

## 4 Course Schedule

Date	Title
2006-08-28	Introduction to Languages
2006-08-30	Introduction to OCaml
2006-09-04	Memorial Day
2006-09-06	Recursion
2006-09-11	Disjoint Types
2006-09-13	Higher Order Functions
2006-09-18	Automata
2006-09-20	Grammars
2006-09-25	LL Parsing
2006-09-27	LR Parsing
2006-10-02	Midterm 1
2006-10-04	Unification
2006-10-09	The Call Stack and the Heap
2006-10-11	Type Derivations
2006-10-16	Natural Semantics
2006-10-18	Operational Semantics
2006-10-23	Variable Binding
2006-10-25	Parameter Passing
2006-10-30	Continuation Passing Style
2006-11-01	Call/CC
2006-11-06	Midterm 2
2006-11-08	Local State
2006-11-13	Objects
2006-11-15	Lazy Evaluation
2006-11-20	Prolog
2006-11-22	Thanksgiving Break
2006-11-27	Cut Operator
2006-11-29	Dynamic Prolog
2006-12-04	Applications of Prolog
2006-12-06	Review Session
2006-12-11	Final Exam 14:00

## 5 Assignments

### 5.1 Breakdown

Category	Number	Weight (each)	Weight (total)
MPs	7	2.85714285714286%	20%
Midterms	1	40%	40%
Final	1	40%	40%

## 6 Grade Cutoffs

Letter	Min. Score
A	85%
B	70%
C	55%
D	40%

## 7 Survey

- Why are you taking this course? What do you hope to learn?
- What is your major?
- What programming languages would you feel comfortable using to write a large program?
- What operating systems are you comfortable using? How long have you used them?
- Any advice for the instructor?